intermittently outputting billing code data to an interface device for distributing the billing code data to information systems for further processing to generate medical bills.

q4 SUB B47

13. (Amended) The method of claim 12, wherein changes in guidelines associated with the billing codes are flagged by an alarm.

SUB B5 7

q5

16. (Amended) A method in a computer system for automating a physicians billing process, comprising, with a handheld device:

displaying a list of patients to be seen on a particular day;

displaying a list of patient locations;

displaying billing codes;

receiving billing code selection corresponding to a patient examined by a physician;

creating a new billing record for the patient;

from an interface device, intermittently sending billing codes for the patient to an information processing system to generate a medical bill.

q6 SUB B67

20. (Amended) The method of claim 19 wherein changes in guidelines associated with billing codes are flagged by an alarm.

REMARKS

Information Disclosure Statement

An Information Disclosure Statement (IDS) is being filed concurrently herewith. Entry of the IDS is respectfully requested.

Amendments to the Claims

Claim 1 has been amended to specify that the handheld processing device comprises "an interface to inform physicians of changes in guidelines associated with billing codes." Support for this amendment can be found in the specification at page 4, lines 7-8, page 13, line 20-page 14, line 3, and FIG. 9. Claim 1 has also been amended to specify an interface to intermittently

communicate with an interface device. Support for this amendment can be found in the specification at page 21, lines 8-26 and FIG. 14.

Claim 4 has been amended to correct a typographical error.

Claim 5 has been amended to correct its dependency as suggested by the Examiner.

Claim 9 has been amended to specify the step of "informing physicians of changes in guidelines associated with billing codes." Support for this amendment can be found in the specification at page 4, lines 7-8, page 13, line 20-page 14, line 3, and FIG. 9. Claim 9 has also been amended to specify that the step of outputting billing code data to an interface device is performed intermittently. Support for this amendment can be found in the specification at page 21, lines 8-26 and FIG. 14.

Claim 13 has been amended to correct its dependency as suggested by the Examiner.

Claim 16 has been amended to specify that the step of sending billing codes for the patient to an information processing system to generate a medical bill is performed intermittently and that it is performed "from" an interface device. Support for this amendment can be found in the specification at page 21, lines 8-26 and FIG. 14. Claim 16 has also been amended to specify that the method is performed on a handheld device. Support for this amendment can be found in the specification at page 3, line 25.

Claim 20 has been amended to correct its dependency as suggested by the Examiner.

No new matter has been added.

Applicant's Invention

The present invention relates to an electronic handheld processing device for storing, displaying and editing of patient demographic, billing, and guideline information. The handheld device can store data and records. Such data can be actions taken by a physician and the records can be clinical and administrative activity data specific to individual patients. The handheld processing devices can distribute information to individuals, collect information from individuals and manage information for individuals. The handheld devices are used by the individual independently of the rest of the system for a period of time during which the individual makes changes, or updates, to some of the data in the handheld device. During this time, a synchronizing server may be receiving data and updates from the rest of the information system.

The system also comprises an interface device through which the handheld device and synchronizing server can intermittently communicate with each other, the synchronizing server transmitting updates and data that it received from the information system to the handheld device, and the handheld device transmitting changed or updated data to the synchronizing server. The synchronizing server may then pass the changed data along to the information system.

The handheld device serves as a standalone database capable of collecting and distributing data from and to an individual. However, since it is out of communication with the central information system, the collected data is not immediately fed into the central system. At the same time, the central information system may be updating its database from another source. Thus, the handheld device database and the central information system data base become distinct. A synchronization server receives the updates from the central information system and tracks the data which must be forwarded to the handheld device. With intermittent communication between the handheld device and the synchronization server, the server exchanges data with the handheld device and then further exchanges data with the central information system to synchronize the central and handheld databases.

The handheld devices can store billing information and/or treatment guidelines that are linked to the billing codes. The treatment guidelines can be promulgated by medical insurance companies and inform the physician of proper billing procedures for a particular course of treatment. The insurance companies will also issue guideline notifications where guidelines have recently changed. The guidelines of the present invention assist the physician in billing the appropriate level for a particular treatment, solving the common problems of under or over billing (specification page 14, lines 1-3). When a physician selects a billing code for a particular treatment, the physician can be made aware of the corresponding guideline and guideline notification, if applicable, so that he is alerted to the appropriate procedures which may be required or permissible to bill for that particular treatment. That the guidelines are indexed by diagnosis helps this feature of notifying the physician at the time of treatment. Guideline notifications help notify the physician when a particular protocol has changed.

As a physician sees or treats patients, or views medical tests related to treatment, the physician can update the billing information in the handheld device. Additionally, as a physician

selects and views different patients and the billing codes associated with their treatment, the handheld device can notify the physician of the treatment guidelines that correspond to those billing codes and any recent changes that may have taken place to those guidelines.

At the end of some period of time, the physician may then cause the handheld device to communicate with a synchronizing server. This synchronizing server can store data and updates from the information system and may distribute such information to the handheld devices during the synchronization process. Likewise, the handheld devices may report to the synchronization server changes or updates to the billing data that the physician entered into the handheld device.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 5, 13 and 20 have been rejected under 35 U.S.C. § 112, second paragraph. Claim 5 referred to "changes in guidelines" where the claim upon which it depended, Claim 1, did not define guidelines. Claims 13 and 20 were rejected for the same problem. Claim 1 has been amended to incorporate the limitation previously contained in Claim 4, cancelled herein, and thus now recites that the "handheld processing device provides guideline notifications associated with different billing codes." Claim 9 has been similarly amended to incorporate the limitation of Claim 12, cancelled herein, and thus now recites the step of displaying guideline notifications for different billing codes. Thus, Claims 5 and 13 now properly depend on Claims 1 and 9, respectively. Claim 20 has been amended to depend on Claim 19, as the Examiner has suggested it should. It is respectfully requested that the Examiner withdraw the rejections to Claims 5, 13 and 20.

U.S. Patent No. 5,325,293 to Dorne and U.S. Patent No. 5,867,821 to Ballantyne *et al.*

U.S. Patent No. 5,325,293 to Dorne discloses a system and a method for correlating medical procedures into billing codes (col. 3, lines 18-20). After a physician enters the medical procedures performed, the system translates the procedures performed into billing codes (col. 3, lines 27-29). The computer system described by Dorne is a standard desktop AT compatible computer (col. 4, lines 24-30 and FIG. 1). A goal of the computer program described by the Dorne patent is to "automatically" generate Physician's Current Procedural Terminology (CPT) codes from the procedures performed by the physician. Thus, users do not enter CPT codes

themselves (col. 4, lines 55-57). To view a CPT code, a user must click a "CODES hotword," which is simply a top-level menu choice of the software, to cause a "CODES field" to appear, revealing the CPT codes associated with a selected procedure (col. 7, lines 12-16). Instead of billing information, the physicians directly enter patient diagnostic and treatment information. After the physician later reviews the data entered, the data is sent to a billing office where billing reports can be generated based on the treatments given and tests performed, etc. (co. 9, lines 53-60).

U.S. Patent No. 5,867,821 to Ballantyne *et al.* discloses a method and apparatus for the distribution and administration of medical services, entertainment services, electronic medical records, etc. to electronic patient care stations that are interconnected to a master library through nursing stations. The types of information included in the master library includes, *inter alia*, management information data including account/billing and inventory control/ordering services (col. 4, lines 46-47). The Ballantyne *et al.* system teaches the use of a personal digital assistant (PDA) device. A member of the medical staff picks up a PDA from a docking slot at a nursing station and carries it to the appropriate room (col. 12, lines 12-17). The PDA stores a copy of the patients' medical records downloaded from the nursing station, which receives its data frm the master library. Upon administering treatment to a patient, the medical records stored in the PDA are updated by the user and the modified health records transferred via wireless communication link to the patient care station, which in turn transfers the updated data to the nursing station col. 12, lines 35-43). At a later time, the PDA is returned to a docking slot at the nursing station and the data transferred earlier is verified and checked for completeness and if there is any additional data to transfer, that can be accomplished at this time (col. 12, lines 55-63).

Rejection of Claims 1-4, 6-12, 14-19 and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,325,293 to Dorne in view of U.S. Patent No. 5,867,821 to Ballantyne *et al.*

The Examiner has rejected Claims 1-4, 6-12, 14-19 and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,325,293 to Dorne in view of U.S. Patent No. 5,867,821 to Ballantyne *et al.* It is respectfully submitted that the claimed invention, as amended herein, is not rendered obvious by Dorne in view of Ballantyne *et al.*

Independent Claims 1, 9 and 16, as amended herein, contain a feature that is not taught or suggested in either Dorne, Ballantyne or both references taken together, namely, that the user of Applicant's invention can directly input billing information into a handheld device. In Claim 1, this feature is recited as "an interface to enable physicians to input billing and diagnosis information." In Claim 9, the feature is stated as "selecting the required patient and billing information once a patient has been examined." Claim 16 describes the method step of "receiving billing code selection corresponding to a patient examined by a physician." Dorne describes a computer program which runs on a regular desktop computer, not a handheld device, that allows physicians to enter patient medical information only, not billing information (col. 3, lines 18-29). Dorne in fact teaches away from having physicians directly entering billing codes because the software in Dorne "automatically translates the performed procedures into billing codes."

Ballantyne *et al.* teaches a similar procedure as to Dorne, but instead describes the use of a handheld PDA for entering patient diagnostic and other medical data. The Examiner has highlighted several portions of the Ballantyne *et al.* patent which discuss "billing" information, however, it is billing for optional patient services such as Video On Demand that the patent generally speaks of. This data is collected at the patient care station, not on the handheld PDA that is used by the health care provider. Nowhere in Ballantyne *et al.* is it taught or suggested that the handheld PDA can be used to enter, keep track of, or even provide patient billing information relating to medical treatment. In fact, the only sections in which Ballantyne *et al.* describes billing information are the section enumerating the data stored in the master library. Patient billing information relating to medical treatment is not discussed in conjunction with the handheld PDA, the patient care station with which the PDA communicates, or the nursing station with which the PDA also communicates.

Applicant's invention allows for doctors to enter billing codes into the handheld device at the point of treatment of the patient, while the handheld device is not in communication with the rest of the information network. This also allows for doctors to keep the billing information with them wherever they go, which helps potential billing information which might get lost as a doctor sees several patients in a row before stopping to fill out old-fashioned billing forms. This functionality also allows for the hospital billing records to be automatically updated when the

handheld device later communicates with a synchronization server and downloads the billing data to that server which then passes the information on to the information system. Bills for the treatment rendered can then be automatically generated by the facility's billing department. Thus, since neither Dorne nor Ballantyne *et al.* disclose or suggest the concept of a computer into which a user can directly enter patient billing information, and more particularly a handheld device for that function, Claims 1, 9 and 16 are not obvious.

A second feature that both Dorne and Ballantyne *et al.* fail to disclose is that of informing the user when guidelines have changed. Claim 1, as amended herein, recites "an interface to inform physicians of changes in guidelines associated with billing codes." Claim 9 recites the step of "informing physicians of changes in guidelines associated with billing codes." Dorne teaches a computer program that can translate medical procedures into billing codes, such as CPT codes. Dorne goes as far as to allow the user to view the CPT codes associated with the selected procedures for the current examination by clicking on a menu selection for this feature (co. 7, lines 13-16). However, at no point does Dorne teach or suggest that the computer can take the action of notifying the user of a CPT code or guideline. Mere billing codes provided as a reference will not perform the function of notifying the user when guidelines have changed.

The difference between guideline viewing and being informed of changes in guidelines is significant. A physician who is prompted to view the guidelines at the time of treatment is more likely to read them before administering treatment. Where the computer program of Dorne does not prompt the user to view the CPT codes, the user is inclined to proceed according to their memory instead of choosing of their own accord to view the guidelines. In the event that a guideline or CPT code may have changed since last viewed by the health care provider, this will lead to errors in billing and perhaps even errors in treatment. Applicant's invention provides for this enhanced feature which is not taught or suggested by Dorne. Furthermore, Ballantyne *et al.* makes no mention of billing guidelines at all, much less the handheld PDA's ability to notify the user of them. Thus, since neither of the cited references teach or suggest this feature of Claims 1 and 9, those claims cannot be rendered obvious by Dorne or Ballantyne *et al.* or both taken together.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Jon C. Trachtenberg

Jon C. Trachtenberg, Esq.
Registration No. 45,455
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133
Dated: 12/3/01

MARKED UP VERSION OF AMENDMENTS

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

1. (Amended) An electronic handheld processing device comprising:

a memory storing demographic information, patient diagnosis information and billing information;

an interface to enable physicians to input billing and diagnosis information; and

an interface to intermittently communicate with an interface device for downloading billing and diagnosis information and receiving updated patient demographic information; and

an interface to inform physicians of changes in guidelines associated with billing codes.

4. (Amended) The electronic handheld processing device of claim 1, wherein the handheld processing device provides guideline notifications [assiciated] associated with different billing codes.

5. (Amended) The electronic handheld processing device of claim [1] 4, wherein changes in guidelines associated with the billing codes are flagged by an alarm.

9. (Amended) A method for automating the billing process for physicians using an electronic handheld processing device the method comprising:

displaying patient demographic information on a screen of the handheld processing device;

displaying billing information on the screen of the handheld processing device;

selecting the required patient and billing information once a patient has been examined;

informing physicians of changes in guidelines associated with billing codes; and

intermittently outputting billing code data to an interface device for distributing the billing code data to information systems for further processing to generate medical bills.

13. (Amended) The method of claim [9] 12, wherein changes in guidelines associated with the billing codes are flagged by an alarm.

16. (Amended) A method in a computer system for automating a physicians billing process, comprising, with a handheld device:

displaying a list of patients to be seen on a particular day;

displaying a list of patient locations;

displaying billing codes;

receiving billing code selection corresponding to a patient examined by a physician;

creating a new billing record for the patient;

from an interface device, intermittently sending billing codes for the patient to an information processing system to generate a medical bill.

20. (Amended) The method of claim [16] 19 wherein changes in guidelines associated with billing codes are flagged by an alarm.